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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/579,624

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Jean-Michel Morelle

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OLIFF & BERRIDGE, PLC
P.O. BOX 320850
ALEXANDRIA, VA 22320-4850

EXAMINER

SMITH, COURTNEY L

ART UNIT

PAPER NUMBER

2835

MAIL DATE

DELIVERY MODE

10/28/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/579,624	Applicant(s) MORELLE ET AL.	
	Examiner COURTNEY L. SMITH	Art Unit 2835	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 July 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-15 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 05/17/2006, 07/21/2008 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. **Claims 1-13**, are rejected under 35 U.S.C. 102(e) as being anticipated by **(Elpedes 7,170,151)**.

Regarding Claims 1, Elpedes discloses a device (**Fig. 1A**) for cooling an exothermic electrical component (**118**) of the type comprising a metal member (**102**) forming a radiator thermally coupled to a metal mass (**108**) of the component forming a heat dissipating mass of the component, wherein the radiator is thermally coupled to the dissipating mass by at least one heat sink formed by an autogenous weld (**wherein Col. 2 , lines 41-45; wherein 104 is solder wettable, and thus a heat sink is formed**) between one face (**surface of 109 which abuts 104**) of the dissipating mass called the dissipating face and one face (**surface of 104 which abuts 109**) of the radiator opposite each other and thereby fixing .

Regarding Claim 2, Elpedes discloses a device (**Fig. 1A**) as claimed in claim 1, in

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which at least one element among the dissipating mass and the radiator is made from copper (**Col.2, lines 23-28**).

Regarding Claim 3, Elpedes discloses a device (**Fig. 1A**) as claimed in claim 1, in which the component comprises at least one heat source (**110**) and in which the heat sink is aligned (**Col. 2, lines 60-64**) with this source substantially parallel to a direction perpendicular to the dissipating face.

Regarding Claim 4, Elpedes discloses a device (**Fig. 1A**) as claimed in claim 3, in which the heat source comprises a semiconductor (**zener diodes--Col. 2, lines 18-21**).

Regarding Claim 5, Elpedes discloses a device (**Fig. 2**) as claimed claim 1, in which the area of the dissipating face included in the heat sink corresponds to at least 5% of the area of the dissipating face (**as depicted in Fig. 2—solder 124 covers an entire dissipating face , and thus at least 5% of the area is covered**).

Regarding Claim 6, Elpedes discloses a device (**Fig. 1A**) as claimed in claim 1, in which the sink also forms a means (**Col. 2, lines 9-10--wherein 101 is mounted via 108, and 108 is soldered to 104**) fixing the component to the radiator (**further disclosed by Col. 2, lines 23-30**).

Regarding Claim 7, Elpedes discloses a device (**Fig. 1A**) as claimed in 1, in which the

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sink also forms a means **(via 116--Col. 3, lines 1-9)** of electrical conduction between the component and the radiator.

Regarding Claim 8, Elpedes discloses a device **(Fig. 1A)** as claimed in any Claim 1, in which the radiator has a plate shape **(as depicted in Fig. 1A)** and is provided with one large face opposite the dissipating mass and one large face opposite to the preceding face, bearing on a support **(120)**.

Regarding Claim 9, Elpedes discloses a device **(Fig. 1A)** as claimed in claim 8, in which the support is made from a material transparent to a wavelength of a laser welding head **(Col. 3, lines 10-12)**.

Regarding Claim 10, Elpedes discloses a device **(Fig. 1A)** as claimed in 8, in which the radiator is provided with two small opposed faces connected by over molding of material preferably of plastic, to two substantially parallel electrically conducting bars **(whereby 102 is connected by plastic molding 112 to conducting bars 116 as depicted in Fig. 2, and further disclosed by Col. 3, lines 2-6)**.

Regarding Claim 10, Elpedes discloses a device **(Fig. 1A)** as claimed in claim1, comprising a plurality of heat sinks **(as disclosed by Col. 1, lines 32-48; wherein a plurality of solder wettable surfaces are set forth)**.

Regarding Claims 12-13, the method steps are necessitated by the structure as disclosed by Elpedes.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. **Claims 14-15**, are rejected under 35 U.S.C. 103(a) as being unpatentable over **(Elpedes 7,170,151)** as applied to claims 12 above, in view of **(Barnett 6,903,380)**.

Regarding Claims 14-15, the method steps are necessitated by the structure as disclosed by Elpedes, **except** explicitly disclosing the support is made from a material transparent to a wavelength of a laser welding head, in which the autogenous beam welding is carried out through the support. However, **Barnet** discloses a support **(27)** is made from a material transparent to a wavelength of a laser welding head, in which the autogenous beam welding is carried out through the support **(as disclosed in Col. 7, lines 57-65)**. It would have been obvious to one having ordinary skill in the art at the time that the invention was made to provide the device of Elpedes with the wavelength transparent material of Barnett in order to allow for a more improved heat sink assembly without overheating the electrical component.

Response to Arguments

3. Applicant's arguments filed 07/21/2008 have been fully considered but they are not persuasive. Regarding Claims 1-15; the applicant argues that 'Elepedes fails to disclose the formation of heat sinks by the autogeneous welding'. The Examiner respectfully disagrees. It is to be noted that a heat sink structure is disclosed, as shown in the above rejection of Claim 1. Although, an autogenous weld is a process by which a structure is manufactured, and is thus not patentable as it relates to this structure claim, as set forth by MPEP 2113—Product by Process Claims. Regarding Claim 14; the applicant argues that Barnett's support cannot be reasonably interpreted as transparent to receive an autogenous laser wavelength. The Examiner respectfully disagrees. As disclosed by Barnett, in the above rejection the autogenous laser weld is explicitly disclosed via support 27 as disclosed in Col. 7, lines 57-65. It is to be further noted that the applicant has not explained why the support of Barnett may not be capable of receiving a laser wavelength.

Conclusion

4. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within

TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to COURTNEY L. SMITH whose telephone number is (571)272-9094. The examiner can normally be reached on Monday-Friday 7:30a-5p (1st Fri. off).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jayprakash Gandhi can be reached on 571-272-3740. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a

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USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/C. L. S./

/Jayprakash N Gandhi/

Supervisory Patent Examiner, Art Unit 2835